

MULTILUMEN CATHETER, PARTICULARLY FOR HEMODIALYSIS

*intro*  
The invention relates to a device called a multilumen catheter, used for the circulation of a least one fluid between a cavity of a patient's body and a means for circulating this fluid such as a fluid perfusing and/or extracting means.

The invention relates more particularly, though not exclusively, to a catheter for hemodialysis.

*instr*  
The term multilumen catheter designates a catheter comprising at least two inner lumens defined by a wall, each of which is intended for guiding at least one fluid.

A catheter of this type also comprises two opposite ends, one of which is called a distal end since it is specifically intended to be placed in a cavity of a patient's body in order to deliver and/or sample the fluid to or from it through at least one channel, the other being called a proximal end, since it is specifically intended to be connected to a fluid circulating means such as a fluid perfusing and/or extracting means.

With the known catheters, the risk of clogging substances being deposited on the surfaces of the perfusing and/or extracting channels is substantial.

One object of the invention is to obtain a catheter having a risk of obstruction by clogging that is substantially reduced relative to the known catheters.

*Summary of the Invention*  
To this end, the subject of the invention is a catheter of the above-mentioned type, this catheter being characterized in that in order to constitute its distal end, it comprises, beyond a so-called dividing point located at a predetermined distance from its proximal end, at least two distinct elongated end portions which:

- in at least one rest position of the catheter, extend substantially parallel to the longitudinal axis of this catheter, each over a predetermined length measurable between a free end and the dividing point,
- are each made of flexible material so as to be

flexible at least under the effect of a lateral action due to the displacement of a fluid,

- contain at least one segment of at least one of the lumens and have at least one channel for delivering and/or sampling the fluid.

The invention will be clearly understood by reading the following description given as a non-limiting example in reference to the appended ~~drawing~~ <sup>Brief Description of the Drawing</sup> ~~which represents~~ <sup>with</sup> a

side view of one embodiment of a catheter according to the invention. <sup>Detailed Description of the Preferred</sup>

The drawing shows an elongated device called a catheter 1 comprising:

- at least two inner lumens 2, 3, defined by a wall 2A, 3A, each of which is intended for guiding at least one fluid 3,

- two opposite ends 5, 6, one of which 5 is called a distal end, since it is specifically intended to be placed inside a cavity of a patient's body (not represented) in order to deliver and/or sample the fluid 4 to or from it through at least one channel 7, 8, the other end 6 being called the proximal end, since it is specifically intended to be connected to a means 9 for circulating a fluid 4, such as a fluid perfusing and/or extracting means.

The fluid 4 is represented by arrows 4.

As shown, the channels 7, 8 are comprised of perforations disposed in the wall of the catheter that defines each of the lumens 2, 3.

These channels allow either the delivery into the area surrounding the catheter of a fluid contained in a lumen of this catheter, or the entry into a lumen of this catheter of a surrounding fluid.

For example, at least one of the lumens is intended for perfusing a fluid and at least one other lumen is intended for extracting fluid.

Also as shown, the lumens 2, 3 for circulating the fluid 4 are for example comprised of juxtaposed lumens,



perfusing and/or extracting channels with which these end portions are equipped.

5 According to another noteworthy characteristic, the end portions have different lengths L1, L2, and the channels with which these end portions are equipped are disposed so that each of them emerges at a different level of the catheter.

10 According to another characteristic of the invention, the channels with which the end portions are equipped are disposed in a group on each end portion, and these groups are disposed at different levels of the catheter.

1 CLAIM:

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